

THE NAVAL SAFETY CENTER'S AVIATION MAGAZINE

# approach

November 1997



**This C-9 and Its Crew Could Have  
Disappeared Without a Trace**

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**Helicopters Over the Gallic Countryside**

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**See You in the Movies—a Hummer Tale**

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Volume 42, Number 6

November 1997

On the cover: AH-1Ws of HMLA 167 over Twentynine Palms.

Photo by Ted Carlson

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# Dirty Tanking

by Lt. Will Powers

**I had only tanked  
twice off an S-3  
at night...**







I WAS DASH 2 on a night bombing hop on the last day before we pulled into Naples, the third of many port calls. Having just joined the squadron for a short at-sea period before we departed on our six-month winter Med cruise, I was finally feeling comfortable flying around the boat. I looked forward both to dropping some baby blue-death and making a trip to Rome the following day.

Despite the very dark, moonless night, the flight went smoothly, and we headed back to the ship for a Mode II approach and an autdog nightcap. We were about to contact marshal when the silence was broken by the landing gear warning horn. I glanced inside and saw the lit landing-gear handle and the red launch-bar warning light. A quick check of the gear handle and launch-bar switch showed both were up. My lead and I walked through the NATOPS steps and contacted a rep.

While the rep was coordinating with the ship, we came up with a dirty bingo of 3,400 pounds (this fact is important later) and reviewed the divert information. I was starting to think maybe I should have attended that semester of Italian more regularly.

As we started our descent, both lights went out. Hey, not a problem, just a normal Mode II, and I'd be back on the ship. Dirty-up went normally with my NVG-equipped lead confirming the launch bar was up. Everything seemed OK until the launch-bar light came back on at seven miles – after the flight had separated! CATCC terminated my approach and tried to get the flight joined back up again, only now we were both in the clouds.

Direction from CATCC quickly changed, and I got a short hook so paddles could check the launch bar using the spotlight. I pulled the launch-bar circuit breaker and flew a low approach, trying not to look at the spotlight shining up at the nose of my airplane.

Once the LSOs checked that the launch bar was up, I thought a short hook would end the story, but I was told to go tank. I had only tanked twice off an S-3 at night; the first time was in the FRS, and the second was six weeks before. Now, as I faced tanking in the dirty configuration, the snakes started crawling into the cockpit.

The rendezvous with the first tanker went well, and I was looking at a 3.8K on gas waiting for them to stream the drogue. The thought of dirty tanking weighed heavily on my mind when the tanker went sour. I again wished I had spent more time on that Italian. The second recovery tanker came to my rescue. He was at my 8 o'clock at about three-quarters of a mile.

I quickly joined up on him and took my first stab at the basket with 3,500 pounds remaining. I lipped the basket. Approach asked my state, and a quick look confirmed the obvious: I had one more chance, then it

**Now, as I  
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would be time to bingo. The next time I got into the basket. As I got my gas, I let the OBOGS generator catch up with my demand. Approach gave me a short hook, and I trapped with a 2-wire. I was very happy to be back on board. Although this had been a minor emergency, I nearly had to divert. I had always heard similar stories, and now I have one to tell, along with several valuable lessons.

First, always have a plan. My flight lead and I came up with one that gave me a warm-and-fuzzy and really dictated many of my actions that night. The second is, as single-seat aviators, we are always challenged with many time-critical decisions. I had an O-4 flight lead helping for the first part, but after the low approach, I was on my own.

Third, get back into those books and keep studying those foreign languages – you never know when you might need it. ✈

*Lt. Powers flies with VFA-105.*

*What appeared to be a good plan in air ops to inspect and recover the aircraft quickly degraded once the launch-bar light came back on. The Hornet launch bar is raised by a spring and mechanically locks in the up position. FA-18 NATOPS directs the removal of CDPs one and four for a CV recovery with a red launch-bar light, regardless of the actual position of the launch bar.*

*A launch bar held up by the spring alone could fall enough on touchdown to "scoop" a CDP. From the perspective of the CATCC rep and air operations coordination, we really put this nugget in a box. Once we decided to recover him instead of making him divert, we should have completed the necessary preparations to the flight deck. Instead, we ran him low on gas during the "what if" process in air ops, and hung it all out on a successful dirty tanking event. The aircraft had a defective landing-gear control unit. – LCdr. T.W. Huff, VFA-105 ASO.*

# Dutch Treat

by Lt. Ron Ates, RNethN

**A**S I MADE MY WAY into the flight station, flight gear in one hand and early morning wakeup coffee in the other, I began my usual preflight ritual by checking the flight-station, circuit-breaker panel. The taxi-light circuit breaker was out and untagged.

"That's par for the course," I thought.


Without a second thought, I reset the circuit breaker, momentarily energized the taxi light and satisfied myself that the CB must have popped on the flight engineer's preflight test. Content that I had solved my first major dilemma of the week, I continued with my preflight.

Shortly thereafter, an unhappy maintenance troubleshooter confronted me and told me she was nearly blinded by the taxi light. Still in the "early morning" mode, I asked if she had been driving by. With a disgusted look on her face, she said she had been working on the taxi light, changing a bulb, and had nearly been fried.

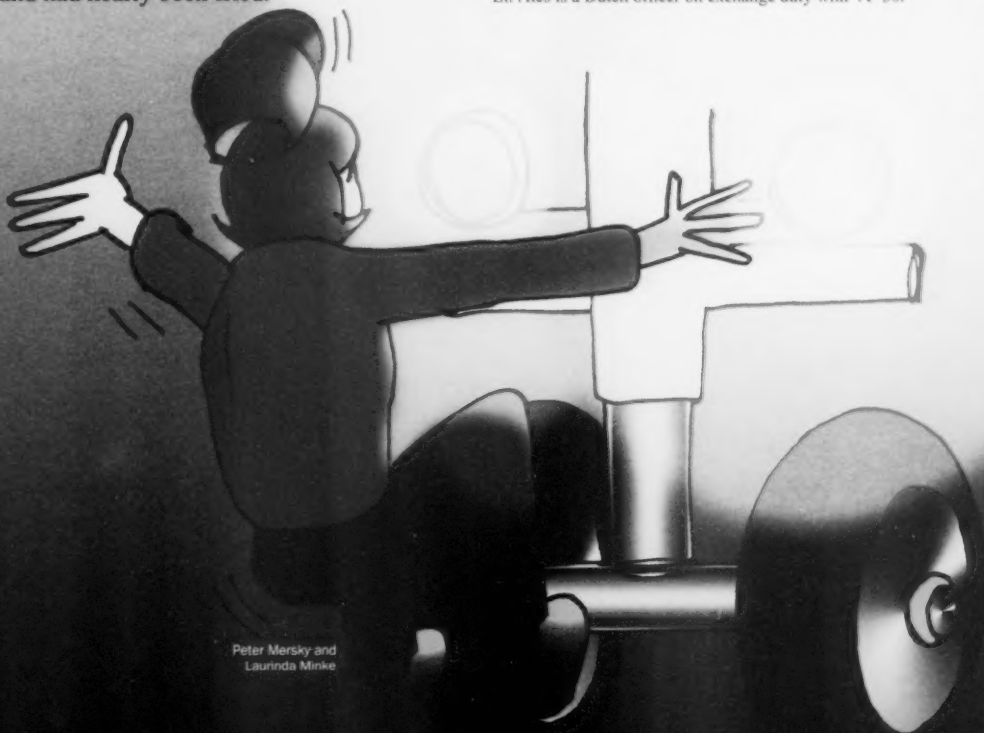
Now fully awake and on the defensive, I asked why she had not tagged the CB.

"Sir," she replied, "it was only a five-minute job, and it would have taken longer to tag the pulled breaker than to replace the bulb."

Now *she* was on the defensive and insisted that I should have called maintenance control to verify whether there was work being done before resetting the circuit breaker.

We both stopped for a moment and thought about what had just happened. She was right – I *should* have checked before I reset an open breaker. But, I was also right: *she* should have tagged the open breaker, or at least made sure someone remained in the flight station to prevent the breaker from being reset while she worked. We had learned a valuable lesson, but in the process, we had nearly hurt someone. 

Lt. Ates is a Dutch officer on exchange duty with VP-30.



Peter Mersky and  
Laurinda Minke



# Protect Our

**L**AST NIGHT, a working party tried to kill me. They'd never even met me, but thanks to their efforts, my aircrew and I, and 45 of their squadronmates, could be somewhere on the bottom of the Atlantic.

It started out innocently enough. Their maintenance chief said, "Get our stuff built up on these pallets, then you can secure." It had been a tough det, and they were tired. We could tell by the way they broke ranks and ran cheering through the hot, humid, night air to board the aircraft home after they finished.

The thing that saved us was the way they had done their job. The minute my crew and I saw the pallets, we knew that the lift coordinators didn't know what they were doing. In their enthusiasm, they had built up the gear so high that it wouldn't fit through the cargo hatch.

A petty officer handed us two "shipper's declarations of hazardous goods" forms. One was for a bottle of inert compressed gas, clearly visible on the first pallet. The other form was for an unspecified adhesive, somewhere in the cargo. The lift coordinator didn't know where the adhesive was, but he assured us it would be compatible with everything else.

Striving to be team players, my loadmaster and his trainee volunteered to reconfigure the cargo so we could load the pallets. They pulled off the top cargo net and the multiple layers of translucent plastic. After removing one box, they spotted the *piece de resistance* – an uncertified LOX converter haphazardly placed between a bottle of compressed gas and an aircraft tire. My loadmaster and I stared at each other incredulously. Hadn't these people ever heard of ValuJet?





# VR CREWS

by Lt. Diana Peterson


I refused to transport the cargo. Once someone has tried to blow up my aircraft, that's it for the evening. After a quick phone call to NALO, we asked base ops to make a log entry. With the passengers loaded, we started the four-hour overwater flight back.

Sometime after midnight, we were picking our way through a couple of lines of thunderstorms, on the edge of VHF range and barely in radar contact, when my copilot pointed out why VR crews get so cranky and suspicious about hazardous cargo. The fear of dying is an obvious de-motivator – the cargo might explode in flight, at night, far out to sea, and no one would have found us or what would have been left of the aircraft. We would have just disappeared, which means the mishap would have been most likely labeled “pilot error.” Other causal factors? “Maybe they flew into a thunderstorm, maybe they iced up and stalled, maybe they just fell asleep and flew into the water...” I could just imagine my name being dragged through the mud.

When things get ugly, VR crews are stuck trying to make our landings equal our takeoffs. We all have have endured grueling detours to hot, isolated air stations or the boat. When it's time to go home, people in each shop often pile their stuff on the hangar deck, and try shaping it into blobs that will stay on a pallet. It seems that no one thinks about how the chemicals from work center 120 might interact with the flares from work center 130 when the atmospheric pressure is significantly reduced. It's no big deal.

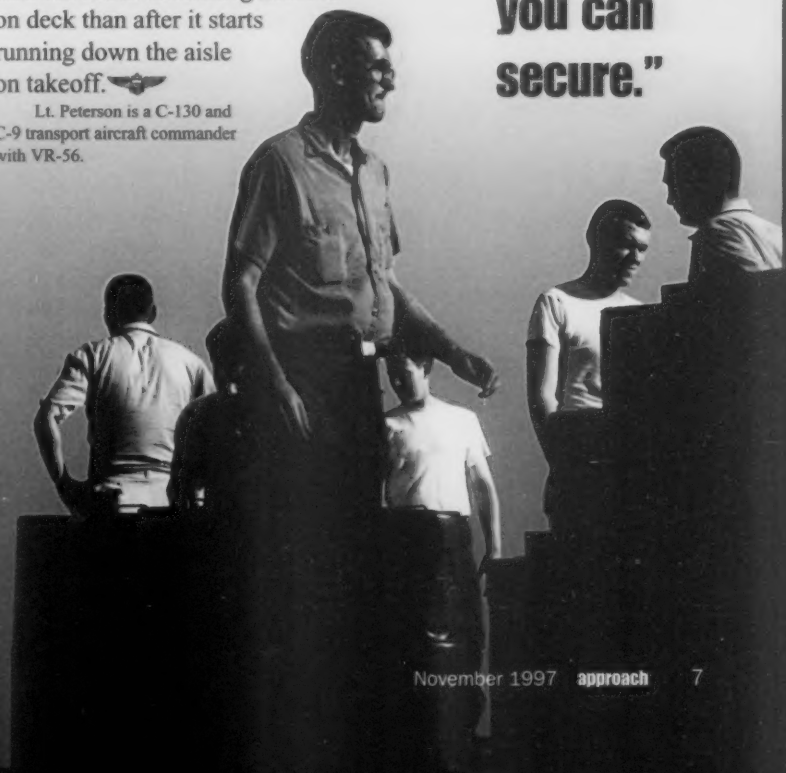
You're around this stuff all the time. The classic phrase that will most likely set off a loadmaster? “We've flown with this stuff before!” That may be true, but that doesn't make it OK.

I'd recommend looking at NAVSUP Pub. 505, which has everything you need to know about preparing cargo for shipment by air. You can find it at any military air terminal or call your nearest friendly VR squadron. It might save your life someday (or mine).

Sure, it's a little tough to read, so if you have anything at all you're not sure about, admit it to the transport crew. Don't try to hide it in the middle of a pallet. I'd rather find out about something heinous on deck than after it starts running down the aisle on takeoff. 

Lt. Peterson is a C-130 and C-9 transport aircraft commander with VR-56.

**“Get our stuff built up on these pallets, then you can secure.”**



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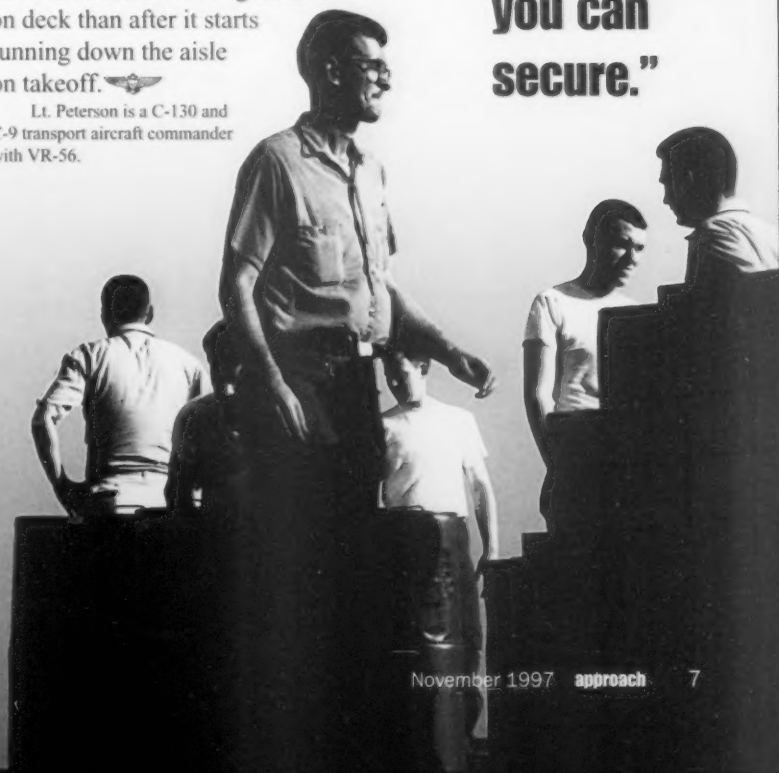
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**“Get our stuff built up on these pallets, then you can secure.”**





by Lt. N.S. Atkins

**A**IRCRAFT'S CLIMAX transition light is out, level 500 feet at 3 miles," I called to my RIO after launching from cat 1 on another beautiful VFR day in WestPac. Scattered clouds and a good deal strike-fighter, weapons-training sign-off for a section day interdiction hop... *thump!* In the Tomcat community, we've all heard it before – that characteristic sound of an engine-compressor stall.

I started to bring up the nose as the right engine's stall light and tones confirmed my suspicions. Electrical surges sent all my engine instruments into disarray as we continued climbing and completed the boldface.

Looking down to scan the right engine's TIT, I noticed that all the engine's instruments were now faulted out. Briefly moving the right throttle up from idle to mid-range to feel for its response, I quickly found out what we didn't want to know: it was dead.

"Right engine is definitely bad," I said. "I think we ought to shut her down."

Tower was now requesting our status and intentions. Our nearest divert being more than 300 miles away, I started preparing myself for the impending single-engine approach. I took one last scan at the engine instruments for any sign of life.

"Fire light on the right side!" I announced in disbelief at the glowing, red, fire-warning light in front of me. Things

were starting to add up quickly. "OK, I'm shuttin' her down," I said. "I can't believe this is happening."

"I'm breaking out the book," my RIO chimed in reassuringly.

"It's a solid light, check back there for secondaries," I added, going through the steps, still not really believing we could actually be on fire. It had to be just a compressor stall.

As I strained to look briefly over my shoulder, I was suddenly pushed into my seat by about 4 G's. Then I found myself thrown up into my straps by negative G as the Tomcat started aggressively porpoising plus or minus 20 to 30 degrees.

"What's going on?" my RIO asked.

My reply was simply, "It's not me!" as the aircraft kept oscillating.

I levelled off at 4,000 feet and focussed on controlling the aircraft. Things did not seem as simple any more, especially since my stick inputs were having no apparent effect. As suddenly as they had begun, the oscillations steadied out. Although the aircraft started to shake heavily, I thought I had control, a judgement I triumphantly (albeit momentarily) exclaimed to my RIO just before the aircraft again started to porpoise out of control.

The F-14 had the control characteristics of an unmanned fire hose, and I knew that



# F-14's Impression of an Unmanned Fire Hose

my inputs were useless. I hoped we could ride out another set of oscillations to buy us some time to figure this thing out. An eternity and a few seconds later, the F-14 violently pitched up and banked right in a corkscrew, then it flipped over.


A blinding flash, a tumbling sensation, and a swift jolt – then my RIO and I were floating in the clear, blue sky, only 100 yards from each other, looking up to see our once powerful 30-ton fighter trailing smoke and debris as it spiralled down toward the ocean. From our muffled yells to each other, we knew that we were both OK, and seeing my RIO's raft deploy beneath him snapped me back into reality – IROK!

Reaching the seat-pan handle with the SV-2 inflated was much harder than I remembered. After two or three attempts, I opted to spend my brief time in the chute finding the koch fittings and preparing for water entry. I'd be damned if I was going to drown in my chute after all this. Altitude judgement is indeed deceptive when you're in the chute, so I waited patiently for my feet to hit the ocean surface and watched my chute fly away as my koch fittings released, and I settled into the water. There were some pretty large swells that day, so I never did see my RIO in the water, despite being only 100 yards away. However, looking up, I immediately spotted a

Hornet circling overhead. My wingman quickly relieved him, and soon after taking out my PRC-112, the voice of my squadronmate put me at ease.

The rescue helo arrived only minutes later, quickly spotting my RIO's raft and hovering right in front of me to hoist him up before it came toward me. Minutes later, we touched down on USS *Independence*, uninjured, with a newly acquired and profound respect for our rotary-winged brethren. We were very happy to be on board.

A little under three minutes went by from the initial "thump" of the engine stall to the "Two chutes" call over the UHF from the nearby Hornet. It had seemed like a very long and complicated period of time. A lot of decisions had to be made, and quickly. If you filter out all the extraneous comm, "blue water" considerations and malfunctioning gauges, and if you think of the aircraft as a whole rather than a combination of systems and switches, you will already be ahead of the situation as it develops around you.

It may be hard to admit you can't bring your aircraft back home. But, as has often been said, you must realize when there is simply nothing you can do and it is time to get out. My RIO's timely decision to eject saved our lives. 

LT Atkins flies with VF-154.



by Lt. N.S. Atkins

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Lt. Atkins flies with VF-154.

# BRAVO

BZs require an endorsement from the nominating squadron's CO and the appropriate CAG, wing commander or MAG commander. In the case of helo dets, the CO of the ship will suffice. A squadron zapper and a 5-by-7-inch photo of the entire crew should accompany the BZ nomination. Please include a squadron telephone number so we can call with questions.



Ens. Bryan Ramsey  
LCdr. Steve Schellberg  
AW3 Eric Flowers

**HSL-49, Det 6**

The crew of Red Stinger 109, embarked in USS Cowpens (CG 63), was 45 minutes into an SSC mission in the Northern Arabian Gulf. After identifying a surface contact 25 miles from the ship, LCdr. Schellberg (HAC) noticed the No.1 engine-

oil pressure dropping and asked the crew to check the left side of the helicopter for leaking oil.

Ens. Ramsey (copilot) and AW3 Flowers (SENSO) could not see any oil, but the pressure was still dropping. AW3 Flowers pro-

vided vectors to the ship. Ens. Ramsey went through the checklist for low engine-oil pressure. LCdr. Schellberg decided to secure the No. 1 engine to save it for landing. Ens. Ramsey completed the checklists for single-engine failure and landing. Then he told the ASTAC (via data link) to set emergency flight quarters. He also coordinated with Strike and had AW3 Flowers check with Red Crown.

Cowpens closed the aircraft's position at best speed, set emergency flight quarters and asked USS Kitty Hawk (CV 63) to launch HS-6's Indian 613 for SAR support.

As Red Stinger 109 closed the ship's position, the HAC had the LSO (Lt. Louis Rutledge) on board Cowpens confirm the single-engine performance calculations and coordinate with the bridge for best winds.

At five miles, Ens. Ramsey dumped fuel and tried to restart No. 1 engine. The oil pressure did not rise, and to avoid catastrophic engine failure, LCdr. Schellberg decided to secure the engine and fly a single-engine approach and landing.

Postflight analysis confirmed a total loss of engine oil. An EI will determine the source of the leak.



**NAS Fallon**

AC3 James Karl  
AC3 Vivienne Wright  
AC1(AW) Todd Domini  
ACAA Jeffrey Emde  
AC2 Larry Strommen

This tower crew, led by AC1 Domini, had just cleared a division of VF-201 F-14As for an early morning launch. Each Tomcat carried four live Mk-83s. As the lead F-14 accelerated through 100 knots, the tower crew saw what appeared to be smoke enveloping the aft portion of the aircraft.

The local controller told the aircrew, who aborted their takeoff. The tower crew then dispatched emergency vehicles. The F-14 taxied back to its line.

The "smoke" the tower crew had seen was pressurized fuel spewing out the right

engine's nacelle from a severed line in the afterburner. Although several other aircrews at the hold-short or taxiing had also seen the smoke, the warning from the tower was the only call the Tomcat crew received.





Cpl. A.J. Erdman  
Capt. G.S. Slyer  
Capt. P.S. Rollin  
SSgt. B.F. Trimble  
LCpl. N.J. Ditzler

While on a ferry flight from Imperial County Airport to MCAS Tustin, Warhorse 05 began vibrating and shaking violently. The vibrations were so severe that all the lights on the caution-advisory panel lit up. A complete loss of both the AFCS and trim system followed.

Suspecting a problem with the CH-53E's tail rotor, Capt. Slyer (PAC and HAC) lowered the collective and set up an approach for landing. Capt. Rollin (copilot) completed the landing checklist, broadcast a Mayday, giving their location (which the squadron heard on the common frequency), and helped Capt. Slyer find a place to land. This incident occurred at less than 1,000 feet AGL in mountainous terrain with few suitable landing sites.

Cpl. Erdman (crew chief) and LCpl. Ditzler (aerial observer) helped find a site, while SSgt. Trimble prepared the cabin and passengers for an emergency landing. The crew landed in a tight, mountainous area.

After shutdown, they discovered that the entire portion aft of the spar of one of the tail-rotor blades had disintegrated in flight.

After receiving a replacement blade, the crew and passengers took less than one hour to change the blade and test the aircraft. They then returned to Tustin.

Lt. Jason W. Fought  
LCdr. Rudolph C. Denz  
AW1(AW) Paul C. Wiese



While on a TORPEX mission against a submarine on the ASW range at AUTEC, Andros Island, Bahamas, the crew of Golden Sword 27 experienced a catastrophic engine failure. Their SH-2G was at maximum gross weight with a non-firing exercise torpedo (EXTORP) and a full load of sonobuoys and smoke markers. The aircraft was eight miles from the beach and level at 400 feet and 90 knots. The MAD bird was deployed, and the data-link antenna was down.

The crew was getting a swap report from the crew departing the range when Golden Sword 27 began vibrating with high-pitched noises coming from the upper transmission area.

LCdr. Denz (HAC) aborted the run and turned toward the beach while lowering the collective. Noting that all engine and flight instruments showed normal, he increased collective to level off at 350 feet AGL. The noise and vibrations increased, and the master-caution light, chip-lights and temp-lights for the No. 1 engine illuminated.

The crew agreed that the engine was failing and decided to secure the No. 1 engine condition lever (ECL). Lt. Fought (air tactical officer) secured the engine. On shutdown, the engine caught fire, and the crew went through post-shutdown fire procedures, windmilling the engine until the fire was out. They declared an emergency and prepared for a running landing.

Lt. Fought reviewed the PCL for emergency procedures and directed AW1 Wiese (SENSO) to bring in the MAD bird and data-link antenna. The reeling machine for the MAD stopped prematurely, and the bird was hung up 12 feet below the aircraft.

When they couldn't retrieve the MAD bird, and considering the outstanding single-engine characteristics of the SH-2G, the crew decided to fly single-engine to a hover to avoid jettisoning or damaging the bird.

After jettisoning external stores and aft-tank fuel, the HAC did a single-engine power check, which showed enough single-engine torque remained to hover.

Finishing the landing checklist, LCdr. Denz flew a single-engine approach to a hover while Lt. Fought called out rotor rpm and torque. Once in a hover, AW1 Wiese lowered the hoist to ground the helo and prevent the aircraft's static charge from going through the MAD and igniting the residual fuel. The SENSO directed the HAC to prevent landing on the MAD.

An inspection of the engine revealed numerous chips on the engine chip detectors, a popped engine-oil filter saturated with chips, and chips and metal particles in the exhaust duct.

# Hornet Tank-Four Transfer Failure

by Capt. K.A. Glerum

**W**E HAD BEEN FLYING off USS *Theodore Roosevelt* (CVN 71) in the southern Puerto Rico Operating Area for several weeks. This was my second set of work-ups, preparing for my second cruise. My wingman and I had just pulled off target to rendezvous over Vieques before returning for our overhead. I heard the Hornet's familiar "deedle deedle," so I looked inside, but there were no cautions and "Betty" didn't say a thing. Probably just some stray trons – you know how these electric jets are.

As we continued inbound to mother, it looked like we might have a little extra time, and my wingman was about 500 pounds below his ladder, so I called the S-3 for a little opportunity give. Sure enough, they were overhead at 6,000 feet with 2K to give. We would be fat.

When we joined the tanker, I crossed my wingman under so he could get his 1K, then I slid in for 500 pounds. We exited the tanker pattern and descended to 4,000 feet to set up in the overhead. Deedle, deedle.

"What now?" I wondered. "CG caution. Hmm, no immediate action. Break out the trusty PCL, calculate my CG."

"Bolter, bolter," I heard on land-launch for the third time. The deck must be moving some.

"OK, let's see," I thought. "I have a CATM-9 on station 1, three tanks, and fuel just above max trap.

"Tower, Check 206, I need to speak to a rep." I figured I'd take the easy way out and have him calculate my CG; that's what he's there for.

"Check, switch to 14 for your rep."

"206, rep, go ahead."

"I've got a CG caution, need you to calculate for me. I'm in standard config, one CATM-9, three tanks, no

other stores. My fuel is tank one, 700, tank two, 1,100, tank three, 1,000, and tank four, 2,800."

I thought, "That can't be right, tank four should have a lot less than that."

About that time, CAG Paddles (airborne in the other section of our jets) came up on our tac frequency.

"206, sounds like a tank-four transfer failure. You'd better bingo."

I looked down, recalculated, and figured I had about 2,800 pounds usable fuel. Roosevelt Roads was 120nm away, a 3.0 bingo. "Can't," I called the rep, "I don't have enough gas."

"Stand by, still working on it," he came back.

"Switching back to 15. Boss, 206, I'm at 3,000 feet abeam the ship with a fuel-transfer failure. I need to land now. I only have 2,800 pounds of usable fuel."

Then I called my wingman.

"Hold on, Rowdy."

The Boss quickly replied, "206, you're cleared. Say again your state."

"Five point six, sir, only 2,800 pounds usable."

"206, say your position again."

"Bolter, bolter." I knew the deck was really moving.

"Three miles aft, 1,200 feet, gear in transit."

"700," the Boss called the tanker, "I want you to hawk the Hornet approaching three miles, report a tally. 206, say your state."

I was glad the tower had assigned a tanker to keep an eye on me in case I needed gas.

"700, wilco."

"206 has 5.5, only 2.7 usable. Three down-and-locked. Hornet, ball."

The LSO replied, "Roger, ball."



**Deedle, deedle.**

**"What now?" I wondered. "CG caution. Hmm..."**

I coached myself. "Don't bolter, a little low is OK, but don't bolter. In the middle, a little sag, a little power, back to the middle, a little sag, touchdown. Roll, roll, roll."

"Bolter, bolter."

"206, tower, you are cleared downwind, watch your altitude, say your state."

"206 has 5.4, only 2.6 usable."

"206, paddles, that was a hook skip, we only have one wire, the 4-wire, and we're targeting 20 feet in front of it. Keep the ball in the middle and on touchdown, hold your attitude with back stick. The deck is pitching so listen to paddles calls."

"Tower, 700 with a tally on the Hornet."

"Great, one wire," I thought. "Good, Vidar [the S-3 tanker] is at my one o'clock, a little high, easy gas in case I bolter again."

"206, Hornet, ball, 2.3."

"Roger, ball."

I was centered, then going up, high, coming down, coming down, power back on.

"Easy with it," paddles said. The aircraft was centered. Touchdown, mil, hold the attitude, yank, stop. When I cleared the landing area, I looked at my gas, 4,800 pounds, and 2,700 trapped in tank 4. Only 2,100 pounds of usable fuel. Would more of tank four have gravity transferred when the low-fuel light came on after burning another 300 pounds? I'm glad I didn't have to find out.

Until then, I had never known another FA-18 driver to have a tank-four transfer failure. The following week, while flying in the western Med, my wingman and I were approaching the initial and about to enter the spin with a flight of three in front of us. My wingman said, "Hey,

Gerbs, I've got a CG caution with 2,400 pounds in tank four, 5,600 total."


"OK," I replied. There was an S-3 on the ball. When he lifted after a touch-and-go, I called, "Boss, 204, my wingman, 211, has a tank-four transfer failure. We're at the initial. I would like to break him a mile upwind for immediate landing. He has 3,200 pounds usable fuel."

"204, you're cleared, number one for the break, S-3 continue upwind. I want the Hornet first."

"Tower, Canyon, flight of three, a mile upwind, will spin it."

The other FA-18s spun, the S-3 continued upwind, I crossed my wingman under and broke him at a mile. Everything worked out, the landing area was clear, and he trapped on his first pass. If we had delayed, we would have had to spin at least once, and he would have been below bingo on his first pass. But good aircrew coordination, a little help by all aircraft in the pattern and proactive people in the tower enabled us to get him aboard without delay.

Did you know the CG-caution will not be displayed if the refueling probe is out? During my tank-four transfer failure, that may have delayed my indications a couple of minutes. I now set the bingo bug at 7,000 pounds at which time tank one should have about 1,800 pounds and tank four should have about 2,100 pounds. I also monitor tank one to be sure it doesn't drop below 1,400 pounds until tank four is almost empty.

As squadron ASO, I am currently writing a hazrep relating our two tank-four transfer failures and recommending a "Fuel Xfer Fail" caution replace the CG caution. 

Capt. Glerum flies with VMFA-312.



After I finished my check, I plugged back into the ICS and restraped in.

Before I was totally connected, I called the crew and told them the check was complete, and I was ready for the rest of the boring flight. Bad move.

The pilot got permission to do a wingover and low fly-by of the ship. He started the wingover, and because I wasn't totally secured in the straps, I was thrown into the air – arms and legs flying, trying to get back into my seat. For about five seconds, the second crewman was laughing, trying to get the pilots' attention. The pilots thought everyone was having a good time, and I was wondering if the insurance information on my page two was up to date.

After I finally got one shoulder strap and one lap strap partly on, we were nearing the bottom part of the fly-by. I had a chance to catch my breath, continue strapping in, and ask the pilot to settle down for a moment. Strapping in is surprisingly hard in a flight suit over a cumbersome wet suit (even a form-fitting one) while at the same time trying to reach the ICS foot pedal. (H-3s aren't very good for VOX.)

**A**IRBORNE inside a helo that was also flying? No, not like a NASA helo – giving astronauts weightless training – just a young AW out of his seat.

Two of us were scheduled for a test-and-go for plane-guard duties in our SH-3D. Since it was during the cold season, we were all dressed in our finest form-fit wet suits. After launch, as part of the post-takeoff check, one of us had to unstrap and make a security check of the cabin. It was my turn, and I unstrapped, unplugged from the ICS, let the rest of the crew know and started my rounds. While I was off the ICS, the pilot told the Boss the aircraft was down for nights.




# trouonauts Da It?

by CWO3 James M. Amerine

The pilot decided to do another wingover and fly-by because so many people were on the flight deck watching us. There I was again, doing my trapeze act, this time flopping all over the second crewman. He finally understood I wasn't having fun as I beat him on the head and shoulders, trying to get a grip on something, even his nose! He told the pilot that things weren't right in the cabin. We steadied out, and the flight returned to normal.

A few bruises and a melted ICS (the pilots' ears were a bit red, too) was the only damage... this time. But consider what might have happened if I hadn't been sitting down when I made the first call that I was ready.

Bouncing around in an H-3 – with a lot of semi-sharp objects, doors that sometimes unlatch during flight, and no barrier between the aft cabin and cockpit – is asking for disaster. A body in motion can go weird places.

Make sure you're completely strapped in, no matter what airplane you're flying, before you say you're in. And pilots, always try to let the crew know what you're going to do. 

CWO3 Amerine started out as an AW. He also qualified as an S-3 TACCO, flying with VS-37. He retired in June 1997, after a tour with the Fleet Combat Training Center, Atlantic.

*The real hazard in this episode is not an AW who was slow to strap in, but rather an entire aircrew willing to make unbriefed maneuvers during an unbriefed airshow. Considering a few recent helicopter mishaps, it should be obvious that the benefits of flathatting – if there are any – hardly outweigh the risks.*

– LCdr. Darren Reinhart, Naval Safety Center H-60 and H-2 analyst.

**"Houston,  
we have  
liftoff..."**

ENDO

# I Shouldn't

**T**WO WEEKS into my first deployment, the battle group encountered what had to be the world's largest fog bank. Flight ops came to a screeching halt. We had to find ways to amuse ourselves without the daily flight schedule. I had been the junior pilot in the squadron until a good friend of mine in the FRS class behind me showed up to dethrone me. We knew each other from our days in Kingsville and ended up as roommates in our first fleet squadron.

Having met the squadron while they were doing work-ups off the coast of California,

I understood the overwhelming feeling he must have had as we departed on WestPac. As the new guy under the LSO's microscope, he had proven himself an extremely solid ball flyer and was meshing well into the squadron.

Finally, after almost two weeks, the fog cleared, and it was back to normal cyclic operations and getting the air-wing night quals. On the second night of flying, I was in our stateroom watching the next-to-last recovery on the PLAT. The deck had been pitching, and with the intense darkness and moderately low overcast, the recovery was colorful.



# Be Flying

by Lt. William P. Kronen

I left to go to the dirty shirt for a snack before hitting the rack. I was sitting down with a couple of E-2 buddies when a squadronmate ran into the wardroom and yelled that my roommate had just hit the ramp.

We raced from the forward section of the ship to our ready room located under the 1-wire. We arrived to see several of our squadronmates in the ready room,

looks of horror and disbelief on their faces. The tape of the PLAT was a little sketchy and showed only the initial impact of the aircraft. Then, the ILART's crew cut the tape off, which only worsened the tension among us because we didn't know the status of the Tomcat's crew.

The next half-hour brought no information about the pilot or the RIO. We had many theories based on pieces of information we had received. Finally, word came they were both alive, but the pilot was badly burned.

I don't know if I was affected more than my friends, but the events of that night seemed like a nightmare. Before the CQ in the RAG, we saw PLAT footage of another F-14 rampstrike a year earlier. Watching an F-14 hurtling down the angle deck in a fireball was a sight I never wished to see again. It was hard to believe that it could actually happen to someone so close to me. I saw my roommate as he came out of surgery later that night but still had a hard time coping with the mishap.

Around 0200, I finally tried to get some sleep but couldn't forget the accident. At 0330, my other roommate and I received a call that my friend wanted to see us again. This time, the smell of the post-op ward, the lack of sleep and the emotional trauma made it hard for me to stay in the room with him. The sight of a friend in his condition, whose main concern was that he was sorry to the whole squadron for what had happened, was more than I could take, and I returned to my stateroom to toss and turn the rest of the night.

To my surprise, I was scheduled for the first go the next morning to fly a missile profile against one of the ships in the battle group, and later to fly a night AIC hop. I realized that everyone was trying to go about business as usual, but I was still having trouble clearing my head. I figured that once I got into the jet I would be able to concentrate on the mission, and everything would be back



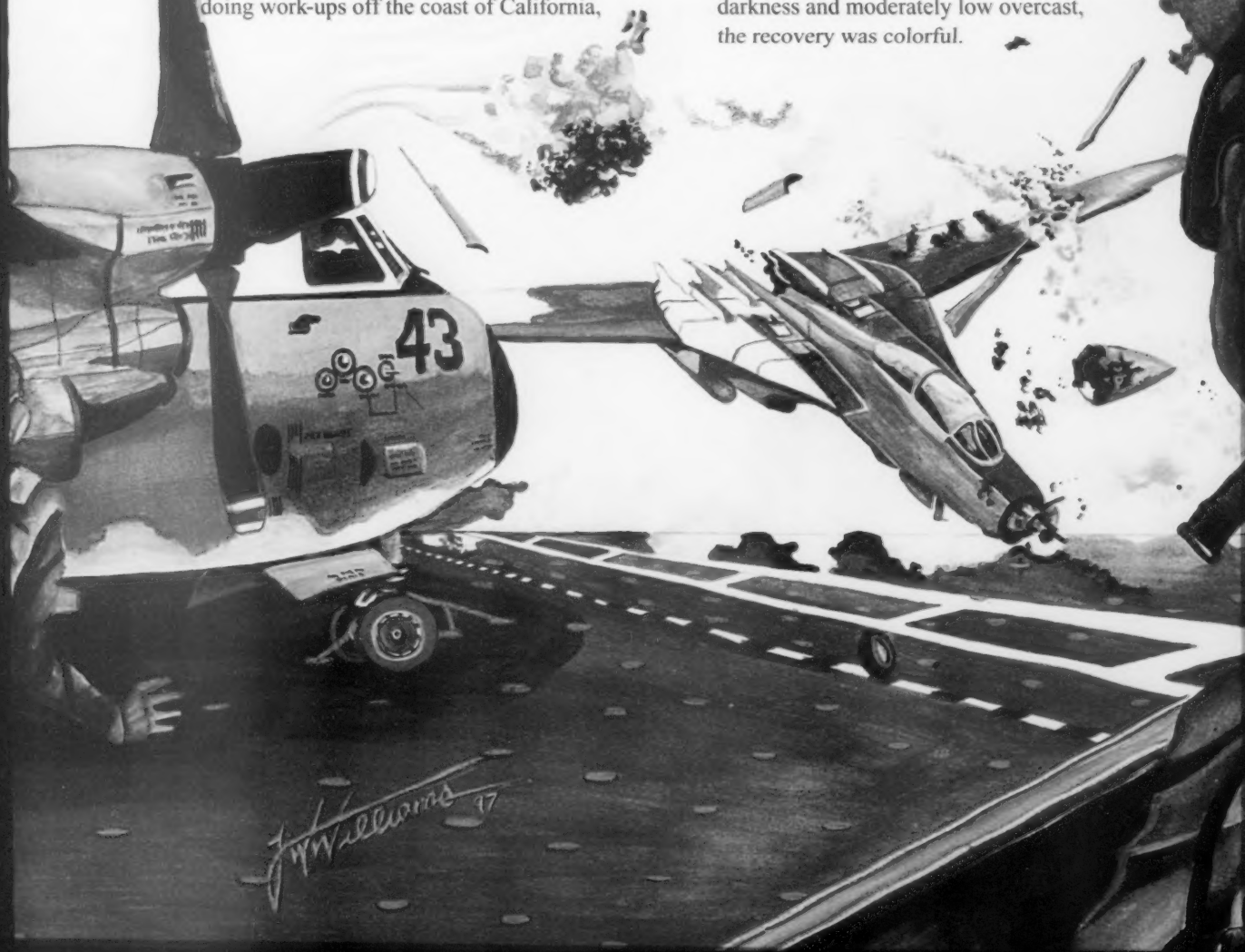
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To say that I was not looking forward to seeing the ship again was an understatement.

**The events of the night before came and went, and I had to fight to focus on the mission.**

The events of the night before came and went, and I had to fight to focus on the mission. After knocking off the exercise, we headed back to the ship in beautiful VFR conditions for what should have been a standard Case I recovery. I came out of the break in good shape and flew a good pattern until the 45, where I took a peek at the ship. Everything was looking good. I was one ball high and was satisfied with it there.

As I rolled out in the groove, I couldn't reduce power enough and ballooned to two balls high. This was not good, but in my state of mind, I was more than happy being on this side of the lens. The LSOs made a few calls to tell me how over-powered I was, but I was trying to make all my corrections with the DLC and not the power. The ball was still on the lens, so I believed I was in


parameters to get aboard. A waveoff call came seconds later, and we powered up to go around. At the time, I was not overly sure what the waveoff had been for, but CAG paddles came up a second later to say the deck was out of cycle, and they'd get me next time. In reality, there was very little deck movement, and paddles was merely trying to calm me down and get me aboard. The second pass was a mirror

image of the first, with some line-up drift in the middle.

Only this time, there was no explanation for the waveoff. I bad-mouthed the LSOs during the upwind turn and was becoming frustrated with myself.


Approaching the 180, the words "Ninety-nine, MOVLAS recovery" rang out over the radio. I immediately asked my RIO, "We've been MOVLAS the whole time?" He confirmed that fact. The third pass was a mild version of the first two – not pretty, but I was able to get aboard.

I made it back to the ready room physically and emotionally drained. It was easy for my squadronmates to see I was not in good shape and an hour later, I was taken off the schedule for that night. I slipped off to my stateroom to be alone. After dinner that night, I went to bed and got 13 hours of badly needed sleep. I woke up feeling normal and was ready to go back to work.

There are several lessons that I learned from this ordeal. We all have mental and physical limits. When we exceed them, we can't fly an aircraft, especially in a carrier environment. In hindsight, I should not have been flying that day. I couldn't concentrate on my job, and I should have removed myself from the flight schedule. This lack of concentration is the reason I did not hear the MOVLAS call before my first pass, and why I mistakenly thought that I would get aboard with a ball on the top of the lens. Coupled with my reluctance to pull power, my mental state led to three marginally safe but ugly passes. 

Lt. Kronen flew with VF-24. He is transitioning to the Hornet with VFA-106.

[illegible]



# Hornets, Harriers and Other Animals

**We didn't swap paint that day,  
and we learned a couple of lessons.**

by Lt. Jeff Vanlobensels

**T**HE DAY STARTED like many others at Enhanced Combined Arms Exercise, or ECAX – a bunch of Navy pilots and BNs waking up in a tent in the California desert. After a quick shower and a bite to eat at the mess tent, I briefed another close-air support (CAS) mission from the expeditionary airfield at Twentynine Palms. My squadron had been there for about a week working with an expeditionary force that included Marine FA-18s and AV-8s. I would be leading a section of A-6s carrying an impressive loadout of blue death: six Mk-76 practice bombs.

After the usual comm-drill, checking in and out with all the various controlling agencies, we were assigned an altitude, a holding point, and a route to get there that would keep us away from live-fire areas. Approaching the holding point, we were told to contact our forward air controller (FAC). He was still working a section of FA-18s and told us to stand by.


While waiting for our FAC to give us a nine-line brief, the section of FA-18s did a fly-by on us. The FAC had assigned the Hornets our altitude and our holding point for their egress following the CAS mission.

We told the FAC about the conflict, and he cleared us to climb a thousand feet higher. At this point, I remembered the "big sky-little airplane" theory and tried to improve our lookout doctrine. We had received our nine-line brief and were waiting for our time on

target. My wingman flew a loose cruise formation, and we were busy figuring out our route and push time from the contact point.

I heard a radio call, "...lead on your nose, pull now!" Time seemed to slow down. I looked forward to see a section of Harriers filling my windscreen. Instead of pulling, I pushed over, ducking my head down automatically as they passed over us. For the next few seconds, my heart raced. I hoped my wingman had gone in the same direction I had. He had.

I do not know why I didn't pull up as the radio call directed. Maybe it was because the AV-8s were already moving up, and they were slightly higher than we were. We found out later that the Harriers had been assigned the same control point at our new altitude by the controlling agency. They had just been switched to our FAC's frequency, and it was the Harrier's wingman who made the traffic call. We didn't swap paint that day, and we learned a couple of lessons.

First, the importance of maintaining a good lookout doctrine. Even if you are assigned a piece of airspace by a controlling agency, that doesn't mean you don't have to worry about running into someone. The second lesson was the importance of good communications. While the Harrier pilot's call was concise and directive, it lacked a call sign and confused anyone else on the same frequency. 

Lt Vanlobensels flew with VA-95. He is now with VAQ-141.

by LCdr. Kelly Johnson

**W**E FLEW TOWARD our assigned area to turn over with two aircraft already on-station. As the mission commander and TACCO, I realized this would be a challenging anti-submarine event. We expected a sonobuoy search pattern to be in the water at our on-station time. Our search tactics also involved deploying a buoy pattern. To better maintain our flexibility, I decided to use internal buoys for our initial pattern because of the expected RF interference from all the other buoys in the water at our on-station period.

To deploy our pattern, the aircraft needed to maintain a groundspeed of 200 knots, allowing approximately 18 seconds between drops. The entire pattern would have to be deployed from inside the aircraft by the three pressurized sonobuoy-launch tubes (PSLT) because of the RF channel interference. Timing was crucial.


Recently, the P-3 community's inflight ARM-ORD aircrew position had been deleted, which meant we had to train other crew members (primarily IFTs) to handle and load sonobuoys. En route, the aircraft's computer system, including the TACCO's keyset, intermittently froze, preventing me from selecting and launching search stores. The IFT spent valuable time troubleshooting this computer problem while other crew members helped him prepare the sonobuoys for launch.

While inbound to deploy our pattern, the computer keyset froze again, and we had to go off-line. Using external sonobuoys was not an option because they had been preset as short-duration tracking sonobuoys for the follow-on tracking portion of our mission.

Based on the short timing between the sonobuoy drops and the numerous procedures required to launch a buoy off-line from the PSLTs, the IFT could not do all the procedures safely. All aircrewmembers in the squadron receive training in basic cartridge activating devices (CADs), SUS, and smoke handling, so the radar operator and third pilot helped the IFT.

When we were nearly finished deploying the pattern, the bottom door of the No. 1 PSLT didn't close after the previous sonobuoy launch. The radar operator had been loading sonobuoy launch containers (SLCs) into that particular launch tube. When he opened the breech, he noticed this problem and told the IFT, who was manning the off-line launch box. The IFT misunderstood the radar operator and thought he meant the door was still closing. The IFT told the radar operator to continue the load. The radar operator loaded the SLC and closed the breech. Before the

# CADs Across



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# the Ocean



breech-locking pins were in place, the IFT selected PSLT No. 1 on the off-line launch box and fired the CAD.

The CAD (which contains roughly the same amount of smokeless gun powder as a shotgun shell) fired, ejected the sonobuoy from the aircraft, propelled the expended SLC upward into the cabin, broke the breech-door hinge, and blew the radar operator's hand clear of the PSLT door.


Fortunately, the radar operator was not in the path of the expended SLC, which ejected approximately 3 feet into the cabin. No one was hurt, and damage was limited to a broken hinge on the breech door. The radar operator and all crew members involved were rebriefed on proper procedures before we continued deploying the pattern.

Postflight maintenance revealed that the limit switch for the PSLT's breech door was out of adjustment, which kept the lower door from closing after the previous launch. Combined with the IFT selecting PSLT No. 1 for launch before the breech-locking pins were in place, this condition allowed the CAD to fire after contact with the firing pins.

ARM-ORD-trained crewmen should check the PSLT before loading sonobuoys and suspend loading if the lower door is not closed. They should ensure the breech door is safely shut before selecting a PSLT on the off-line launch box.

Several factors contributed to this incident. This mission required the unwavering attention of the ARM-ORD-qualified crew member. The adjustment to the recent replacement of the inflight-ordnanceman position in the P-3 by NATOPS-qualified IFTs in the ARM-ORD position has not been without its growing pains.

In a perfect world, the IFT can handle the added responsibilities, but the moment a hiccup occurs within one of his other areas of expertise and the secondary subject-matter expert is not available to assist, problems arise and people can get hurt.

The sonobuoy is just one of many pieces of extremely dangerous ordnance, like the Mk-64 and Mk-82 explosive SUS, that P-3 crews handle inside the aircraft. The chain of command has recognized the need for designating the off-duty flight engineer as the backup to the IFT. What remains is to standardize performance through NATOPS, as well as separating all ordnance qualifications from the crew member's primary position-qualification requirements. We must also continue training people and evaluating the published procedures. 

LCdr. Johnson was an instructor TACCO with VP-16 before assuming his current position as naval aide to the VCNO.



# Lights, Ca

by Lt. R.W. Peck

**T**ASKED BY HIGHER AUTHORITY, Big-Eye Six launched from USS *Dwight D. Eisenhower* (CVN 69) to control the rendezvous of a special military aircraft and a hijacked 747 over the Atlantic Ocean. The Hummer lost contact when the military aircraft was mysteriously destroyed. Mission terminated. The E-2 banked dramatically against a crimson sunset as the soundtrack music rose in intensity. Just another day in the exciting business of airborne early warning and control, or so the script read.

In reality, the crew of Banger 601 had launched from NAS Miramar for this sunset photo-shoot in a movie called "Executive Decision." A production crew was also wrapping up the filming of an internal scene in the combat information center of another Wallbanger aircraft back in the hangar.

Because of the high-level tasking, the mission had lots of visibility. The filming was funded by Paramount Pictures, and our coordination with the crew of the camera-laden Lear jet and producers was extensive. However, because of a compressed deployment turnaround cycle and

major maintenance, we didn't have a backup aircraft to support this event.

Things got off to a bad start when the Lear arrived 30 minutes late. After the standard aircrew NATOPS brief and in-depth form brief with the crew of the Lear, the Navy crew walked quickly to make up for lost time. Timing the launch for a sunset backdrop left little room for flexibility.

All systems checked normal until seconds before taxiing, when the radar officer (RO) noticed an engine bleed-air leak in a tangle of hydraulic lines and electrical wire bundles in an area of the E-2's forward equipment compartment known as the "snakepit." The mission commander verified the leak and coordinated with the aircraft commander to stop the flight to have maintenance troubleshoot.

A stream of unregulated 250° F, 109 psi bleed-air from a damaged bleed-air cap nozzle in the snake pit was blowing on a wire bundle about four inches away. This bleed-air leak could have started an electrical fire in a critical area. The situation was already looking like safety-article material and confirming a long-standing community


# amera, Action!

concern about electrical and hydraulically fed fires (very bad for aviators without ejection seats).

On paper the decision was clear: don't risk the aircraft and crew for a photo, and the crew didn't hesitate to make this call. However, external pressures were significant, causing consternation as the Wallbangers faced potential embarrassment, and the production team faced costly delays. It was clear that the crew would do the right thing to fix the problem and continue with the flight.

We had one chance: if securing the bleed air isolated the leak, the AME troubleshooter could replace the cap with one from another aircraft without shutting down the engines, thus saving the mission. If, however, the leak was not isolated after securing the bleed air, the crew would have to shut down the engines, lose the event, and wipe the egg off their faces, not to mention losing their chance at 10 minutes of fame. Fortunately, the AME2 isolated and capped the bleed-air leak. A QA representative checked the work, and the aircraft taxied after only a 10-minute delay. Banger 601 flew off into cinema history.

The RO's thorough pre-taxi check identified a potentially catastrophic problem. And although there were varying levels of experience among the crew members, effective communication between a junior mission commander and a senior aircraft commander established that the leak was serious enough to warrant inspection by an AME.

Even if circumstances allowed a spare, time was so tight that a second man-up would not have been possible. Looking back, it would have been healthy to step back in the brief and emphasize that this situation did not jibe with the 3710 definition of operational necessity, despite the high visibility of the flight. 

Lt. Peck is an NFO with VAW-117.

*Thanks to AME2 Rafael Otero for his help with this article and his outstanding repair work on the E-2 in this story.*

# Are You Crazy?

by Lt. Chris Rollins

I WAS ON MY first cross-country as a SERGRAD instructor pilot. The hop was an air-nav from Meridian to Ellington Field in Houston. The student was an above-average player. We had plenty of fuel for the leg, holding and the two approaches required to complete the hop. The weather, while not CAVU, was not forecast to be a problem. What could possibly go wrong?

The preflight was normal except for a delay getting airplanes. We were trying to get all the way to Phoenix, so leaving a couple of hours late made it harder to fly all three legs.

As we made our way toward Houston on the first leg, the daylight began to fade, which we didn't expect until the second leg. We checked with a Metro about halfway on the leg; weather in Houston was worse than forecast, but still well above minimums. We had plenty of gas, so things were still looking good.

When we checked in with Houston Approach, we requested one turn in holding and then a high tacan to a low approach. They cleared us into holding for our one turn and told us to expect the high tacan. Approach also updated Ellington's weather. It was going down, still above mins, but much lower than forecast. I didn't like the trend I was seeing.

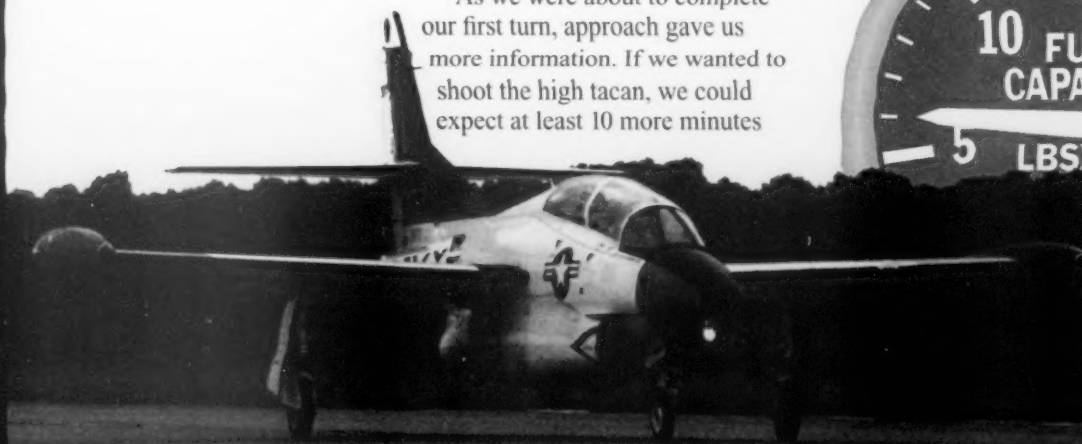
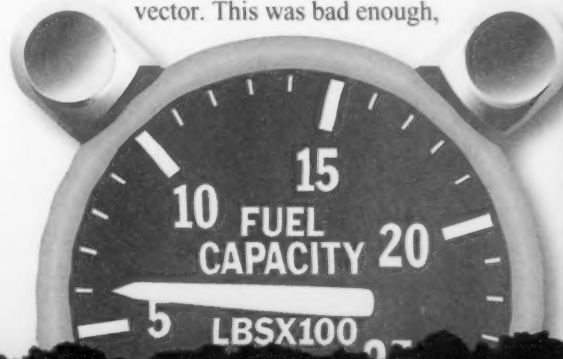
As we were about to complete our first turn, approach gave us more information. If we wanted to shoot the high tacan, we could expect at least 10 more minutes

of holding because of traffic congestion. However, if we took vectors to the final approach course of the high tacan, we could leave holding now. At this point, I made my first mistake. I looked at the gas gauge, and it said "a lot." Since I didn't want to get behind on the required number of approaches for this weekend excursion, I elected to stay in holding for the 10 minutes.

After 10 minutes, we prompted approach that we were ready to go. Our controller said, "Fine," but the Houston traffic couldn't accommodate a high tacan yet. He then updated Ellington's weather for us and guess what — it was a little worse. We got the same option as before: continue holding or take vectors to the final approach course. I looked at the gas gauge, and this time, it said, "More than enough, but not a lot." I made my second mistake and continued holding. After 25 minutes of holding, the gas gauge said, "Enough with not much left over."

Finally, I relented, and we left holding on vectors for the tacan final.

We were then initiated into Houston IFR on a busy Friday night. Vector followed vector. This was bad enough,





# You Should Be on Deck Now!

but the first instruction we received was to leave our holding altitude and descend to about 2,000 feet. All these vectors were burning up a lot of fuel. After about 8 to 10 minutes, I looked at the gas gauge, and it said, "Just enough."

In the meantime, Ellington's weather had further degraded to about 100 feet above mins. We were several miles past the field on downwind and heading farther away when I told the controller that we were approaching minimum fuel. The busy controller apparently did not like that phrase.

"Sir," he huffed, "if you need to declare emergency fuel, then declare it; otherwise, there isn't anything I can do for you!"

I became agitated and pressed him. I told him that if I didn't turn to final soon, I would have to do just that. He replied he would turn me as soon as he could. I was so far away from the field on downwind because he wanted to give me adequate spacing from the three TH-57s in front of me.

I had never declared an emergency before and was reluctant to do so. This poor line of reasoning made me continue to make a bad situation worse. I stayed on the vector, even though I knew I needed to turn to final. If I had to divert, I might not have enough fuel.

In a couple of minutes I was ready to declare that emergency when the controller finally turned us to final. We intercepted the final approach course with no problems and were on our way to landing at last. As we hit the final-approach fix and started our descent, in IMC, I looked at the gas gauge, which now said, "Are you crazy? You should be on deck by now."

By that time, my adrenalin level was, shall we say, high. I was shooting an approach to a strange field, at night, with weather at minimums. There wasn't much

IMC flight experience in the cockpit and, by the way, there really wasn't enough gas to go anywhere else.


Approaching MDA, we broke out of IMC and clearly saw the lights below. I relaxed momentarily, and then the low-fuel light came on. There were a lot of lights in front of me, but I couldn't clearly break out any rabbit lights or runway lights. We were switched to tower, and I immediately asked them to confirm that I was lined up for the proper runway as I could not yet break out the field.

Tower responded they had me in sight, and I looked good. I remarked that I couldn't see their approach lights and asked them to confirm that they were on. The lights suddenly appeared before me at the same time tower said they typically turn on those lights only when asked to do so.

A few moments later, as we rolled out, I looked at the gas gauge one last time. It now said, "You are crazy! How did this happen?"

The first step in avoiding this harrowing situation was paying more attention to the weather. When conditions deteriorated below what was forecast, I should have assumed they would continue to deteriorate. Second, when the controller offered me vectors to the final approach course the first time, he was telling me that a high tacan wasn't something he was going to be able to do, so I might as well forget it.

Third, when he told me I could declare an emergency and that I was number 4 for the approach behind three helicopters, he was inviting me to declare an emergency, get on final sooner, and let the guys with plenty of fuel get out of my way.

Like many aviators before me, I let the need to "get the X" cloud my judgment, and I put myself in a box. 

Lt. Rollins was with VT-7 at the time of this story. He is now on the staff of TRAWING I.

# Rime Ice Pro

by Lt. Michael Hall

**I**T WAS THE FIRST NIGHT of a two-week FleetEx in late January on the East Coast. I had flown a Prowler on board earlier in the day in marginal Case I weather to get two touch-and-goes and two traps to complete my day CQ requirement. I needed just one night trap to regain currency. As we preflighted in the horizontal rain on a blacker-than-black night, one thought kept running through my head: "Why am I doing this again?"

The launch was as uneventful as any night cat shot can be into the darkness with no horizon, and we climbed through the goo to get some comfort time before shooting the approach. Passing through the freezing level, we noticed light rime ice forming on the leading edges of the wings, drop tanks, and pods. We double-checked that the engine anti-ice and pitot heat switches were on, and continued the climb, hoping to reach VMC.

Switching to marshal, we got our holding instructions and an expected approach time. Still IMC at our marshal altitude, we agreed that the ice buildup was light, did not seem to be increasing, and that we had often seen worse operating around Whidbey Island. Just to play it safe, we asked for a higher altitude as we heard our air-wing comrades reporting icing in the

clouds at all altitudes. Marshal reassigned us holding at angels 17, just at the top of the cloud layers, and we orbited for 15 to 20 minutes before our push time. The rime ice we had picked up in the climb was still visible on the airframe, but was not too extensive.

We completed our descent checks, and again confirmed the engine anti-ice was on, ensuring that hot bleed air was being routed to the engine-inlet guide vanes. EA-6B NATOPS states that indications of engine-inlet icing are an increase in EGT coupled with a decrease in rpm as a result of reduced airflow through the engine. Neither of these indicators was present at any time during the flight.

We descended at 75 percent power, in accordance with NATOPS, with speed brakes extended, and 250 knots indicated. We didn't see any more ice accumulating on the way down.

Below the 6,000-foot freezing level, we encountered more driving rain, and the ice began breaking up. I brought the speedbrakes in at 5,000 feet to shallow our rate of descent and realized that we were much closer to the ship than we normally would have

K. Hagerut



been at that altitude because of our previous re-marshal at a higher holding altitude without a corresponding change in DME.

Approach directed us to begin a left 360 to continue our descent. Rapidly retarding the throttles, we noticed a chug from the engines followed by unnerving quiet. Shoving the power back up, the engines surged reassuringly, and a quick check of the gauges revealed normal oil pressure, EGT, and fuel flow. We continued the descent, slowed down, dirtied up, and leveled off at 1,200 feet. As the power came back up, the motors sounded a little rough, and I noticed that we needed a slightly higher-than-normal fuel flow to maintain airspeed and altitude.

At this point, my plate was full as I completed the landing checks and struggled with mild vertigo. My right frontseater held the windshield air switch on, trying to keep the windscreen clear of rain for me.

After trapping, we taxied, shut down and climbed out. The usual feeling of relief after a night trap, coupled with a desire to get out of the weather, made us hurry below decks, neglecting a normal postflight.


After debrief over a slider, I hit the rack.

The next morning I was shaken awake by my front-seat NFO who said we needed to get to the ready room to talk to the CO about the two engines we had FODed. That woke me up faster than a shot of bottom-of-the-pot Navy coffee.

## **...we noticed a chug from the engines followed by unnerving quiet.**

Although the evidence had since melted, it was obvious that heavy inlet icing, loosened by the rain at lower elevation, had dislodged and damaged the compressor sections of both engines. It was sobering to see the bent and twisted turbine blades, and it was a tremendous testament to Pratt & Whitney that their engines could take damage like that and still get us home.

We went over the events of the night before, trying to see if we could have done something to prevent this damage. Engine anti-ice had been on from takeoff to landing, we had stayed clear of clouds during our short time in holding, and we had descended as rapidly as conditions would allow at the power setting recommended in the EA-6B NATOPS. We had never seen any ice building on the windscreen, which is often the first indication of icing in an EA-6B.

We were not alone that night. The air wing had several ice-FOD incidents that night: a Tomcat, a Hornet, and another Prowler had also been damaged. The point (driven home by this experience) is that we can no longer rely on visual icing indications on the leading edges of wings, pods, drop tanks, or windscreen to gauge the severity of ice buildup. Unlike the Hornet, the EA-6B does not have a system for warning the aircrew of icing conditions. Although confident that we complied with NATOPS procedures, I will treat any icing conditions with a great deal more respect in the future. 

Lt. Hall is an LSO with VAQ-141.

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Lt. Hall is an LSO with VAQ-141.

# Smoking Mv

**P** WAS A BEAUTIFUL FRIDAY afternoon in San Diego, and I was launching on a cross-country to Maxwell AFB with a brief stopover in Little Rock. It seemed harmless enough for a crew of four lieutenants in a trusty Hoover, but we had started the recipe for near-disaster the night before.

Thursday night, I had gotten a phone call at home. The squadron NATOPS officer wanted to tell me I had been chosen to fly a cross-country with him and that we would be leaving as early as possible the next morning. I was to accomplish three syllabus events en route. Because it was such short notice, he told me he would do all of the flight planning. Besides us, the crew included a relatively new NFO instructor and an NFO from the wing along for the ride. I had just received my NATOPS qualification, had just completed weapons-systems ground training and had 20 hours in the airplane.

Because the cross-country was to include a weapons-systems check ride, I needed to take my closed-book NATOPS exam on weapons systems before my check ride on the flight home. My class was scheduled to take the exam on the following Wednesday, but I would not have the luxury of having the weekend to study for it. I studied as much as possible as soon as I hung up the phone. However, the next day I did not feel prepared to take the exam and asked if I could take it on Sunday before the return trip. My instructor said that there would be no time on Sunday and told me I could take it airborne while he flew the first leg to Maxwell.

The flight got off to a bad start right after takeoff. Because of an ATC mix-up, they told us to hold southwest of the field. We held for almost half an hour at 6,000 feet, burning precious time and fuel. Once we got

sequenced into IFR traffic, I recalculated our fuel burn on the way to Maxwell and determined that we were just over minimum fuel.

Thirty minutes into our flight, both speedbrake channels began kicking off-line whenever the pilot clicked the coolie hat. He tried reconnecting them, but the channels kept dropping off-line. After about the fifth or sixth attempt, the pitch trim began kicking off along with the speedbrakes. We ended up losing the speedbrakes altogether and could only get single-channel pitch trim. Then we smelled smoke. Everyone donned their oxygen masks and began talking about landing at divert fields or returning to San Diego. In five minutes, the smell had dissipated, and we decided to press on.

Our pilot pulled the exam from his nav bag and told me to get started. As we got closer to Little Rock, our pilot decided that we should bypass it. The delay by ATC in San Diego not only had wasted time, but a stop in Little Rock would also mean refueling. We would not have time to do that and make it to Maxwell before the field closed. Meanwhile, the weather at Maxwell was reported as partially obscured with a 200-foot ceiling and 1.5 miles visibility, with thunderstorms and hail in the vicinity. The weather at Little Rock was considerably better.

As we closed in on Maxwell, our pilot decided to reset pitch trim, trying to get



# Inflight Exam

by Lt. Geoff Hicks



dual-channel pitch. Instead, we lost both channels. It was a bumpy ride through the clouds as we made our approach. The NFO instructor in the TACCO seat and I concentrated on the emergency procedures for landing with no pitch trim. As we closed in on the field, the weather began to clear a little. Tower said a thunderstorm had just passed and there might be standing water on the runway.

"Maybe we should take the arresting gear," I said.

Then the TACCO added, "Uh, fellas, there's no arresting gear at Maxwell. I'm looking at the approach plate, and I can't tell whether the runway is 7,000 feet or 9,000 feet. It shows a 1,000-foot displaced threshold at either end."


So there we were: on final, flaps toggled down to takeoff by the emergency method, no pitch trim, no speedbrakes, no arresting gear, a wet 7,000-foot runway, 1,500 pounds of fuel and thunderstorms all around. And wouldn't you know it, our anti-skid brakes indicated a failure.

Our closest divert was approximately 100 miles away, and the bingo profile called for 1,740 pounds of fuel. Our instructor pilot skillfully maneuvered the airplane and basically stalled it onto the runway at the

approach end. The thud from our landing helped us decelerate, and we rolled out and stopped without incident.

Upon arrival at the BOQ (having kissed the ground along the way), we had a powwow on what had gone wrong during the flight. The instructor pilot had a bad case of get-there-itis. He wanted to get to Maxwell in a bad way for personal reasons. As an FRP, I had felt very junior with the company in the jet, but I should have been more assertive in communicating my concerns about our problems. When we experienced the first problems 30 minutes into the flight, I felt we should have RTBed, but didn't say anything when the instructor pressed on. Then, instead of taking a written test airborne, I should have focused more on the navigation and weather. Finally, when we were an hour out from Maxwell, low on gas and looking at nasty weather ahead, I should have been more assertive about proceeding to an alternate rather than pressing on. We passed up good weather and a 12,000-foot runway at Little Rock.

We did not discuss the field at Maxwell during the crew brief. I had not looked at a diagram for it until we had begun our approach. I had no idea the runway was so short or that the field had no arresting gear. Since my instructor had told me the night before that he would do all the preflight planning, I had instead focused all my efforts on studying for the test.

Fortunately, we learned these lessons without a mishap. We had several warning signs that we just should not be flying that jet on a cross-country. My present CO often tells us that anyone, from an E-1 to an O-5, can stop a launch if they see something unsafe. That also translates to the cockpit, where everyone must feel comfortable about speaking up. 

Lt. Hicks flies with VS-29.







by Lt. Kevin Gallo

**A**N MH-53E FORMATION FLIGHT from Sicily to Paris is a long way from the coveted, Pensacola-to-Washington, weekend cross-countries in flight school. It's one of those duties for which everyone volunteers. I had never realized so many pilots and aircrew in our squadron had studied French in high school and were, therefore, specially qualified for this "arduous" mission. However, it didn't turn out to be a vacation.

The first bad omen materialized while shooting the ILS approach to Le Bourget Airport through a thin overcast. Before the approach, we could see the ground through the scattered layer and were sure we could shoot an approach in formation. We lost contact during the descent, and after the initial surprise and panic subsided, lead successfully completed the ILS while wing shot the missed approach, took another lap around the Eiffel Tower, and landed 20 minutes later.

We spent the next week supporting a VIP's visit to Paris. The work days were long, but who could complain – we were flying down the Seine over downtown Paris and eating real French food. The real story began the day of our departure from Paris. Our intended route of flight went roughly from Paris to Hyeres (on the Mediterranean coast near Toulon) for a gas stop, and then on to NAS Sigonella. The terrain from Paris to Hyeres was mostly flat farmland for the first half, then alpine foothills. The weather brief promised no ceilings below 2,000 feet and, as it was the middle of December, a freezing level at 3,000 feet.

A coat of ice ruins the aerodynamic properties of helicopter rotor blades, so flying IFR wasn't an option. Also, 2,000-foot ceilings with unlimited visibility would be more than sufficient for a safe, VFR, two-plane flight. We were soon on our way.

After 20 minutes of vectoring to reporting points with French names we couldn't pronounce, we roared out of the Parisian suburbs beyond radar control into the countryside. Navigating VFR, using VORs and GPS to back up our position, we traversed the snow-covered farmland, mostly rolling hills with rustic houses and storybook medieval castles. Because it was a relatively long flight leg and we did not intend to fly particularly low, we were navigating off a 1-to-1,000,000-scale Operational Navigation Chart (ONC).

We soon found ourselves with gradually rising terrain below an overcast layer. We were not too concerned – the visibility was still good, and our flight path went over the lowest land in the vicinity, a valley just west of the Loire River.

At this point, an astute copilot in the lead aircraft would have been breaking out the 1-to-500,000-scale Tactical Pilotage Chart (TPC), but I was preoccupied with plotting our position and trying to get flight clearance from various controllers. To every VFR pilot's chagrin, French airspace is riddled with confusing, overlapping, restricted areas that make flying in the Los Angeles TCA pale in comparison.

As we approached the small city of Saint Etienne, visibility started to diminish. A light snow forced us down to 500 feet AGL to remain beneath a cloud layer. Icing, while a concern, did not become a factor. Wing slid into trail and we reduced speed to 100 knots as we tried to pick a route through the upcoming hills.

I'm now convinced that any time you have to pick your way through mountainous terrain in questionable weather, it's a good time to turn back.

On the far side of Saint Etienne, a low mountain rising 1,000 feet above the terrain interrupted the valley. Our original flight path went directly over this mountain, but if we were restricted to 500 feet and the mountain was 1,000 feet – well, you can do the math. I opted for a route to the right. To complicate matters, we couldn't turn until near the mountain because of the adjacent hills.

A couple of miles away, we started to see the mountain. Things were still going OK. Then suddenly, the windscreen turned milky white as we went IMC. Wing called, "Lost contact," broke right and climbed. When they reached VMC between two cloud layers, most of their excitement was over, but we weren't so lucky.

We had entered another dimension, not of sight or sound: the "Inadvertent IMC Zone." Because our wingman was near, we did not want to make any immediate turns or climbs. After a short delay, I suggested we turn right.

The pilot at the controls (who was also the aircraft commander) was concerned about the other aircraft's location and was still establishing his instrument scan. We remained straight and level, slowing to 80 KIAS. The next 10-20 seconds seemed like minutes. While glancing at the gauges to back up the pilot, I frantically

**...we had been flying at 500 feet AGL, and we were now at 200 feet AGL without having descended.**

referenced the GPS to reconfirm our exact position and plot a good course, wishing we had a chart with more detail.

Once wing broke out and called VFR on top, we started a gradual climb. Then, the yellowish-orange light bulb on the radar altimeter lit up. I instantly reached an unpleasant realization: the radar alt bug was set at 200 feet.

A few seconds before, we had been flying at 500 feet AGL, and we were now at 200 feet AGL without having descended. We were about to run into the mountain.

"Turn right, now," I yelled.


No sooner had I keyed the mike than we turned about 90 degrees to the right and climbed, soon breaking out above the lower cloud layer. Sure enough, there was a mountain to the left, another mountain with a tower shortly ahead, and our wingman a mile or so to the right. After a few minutes, my heart started beating again, and we looked for Boutheon Airport, the nearest alternate.

Wing rejoined on us as we radioed Saint Etienne Approach with our intentions. We weren't under radar coverage, and there wasn't a DoD approach to Boutheon or a navaid near the field. In short, we had to find the field VFR. No problem. I pulled out the TPC and plotted our position from the GPS.

"So, which way to the field?" the aircraft commander asked.

"Uh, it should be right here," I responded. We were within a mile or two of the field but couldn't see it through the intensifying snow. At this point, we considered landing in a field amid a herd of half-frozen cows, but this was a less-than-desirable option. It's a major inconvenience and somewhat of an international incident to land two 50,000-pound helicopters in a French farmer's backyard.

After a couple of circling turns, we saw the dim outline of the runway and landed. We weren't the only ones who had a problem with this unforecasted weather. Later that afternoon and evening, several commercial airliners also diverted to this small field. They presumably used the non-DoD ILS approach.

The next day, the weather was severe clear, and we enjoyed an uneventful flight down the Loire River valley, the countryside covered with a fresh blanket of snow. Even the French air traffic controllers seemed easier to understand. 

Lt Gallo flies with HC-4.







# LESSONS LEARNED

There are two ways to get smart. One is through experience – we call this “the hard way.” The other is to learn through others’ experiences. The second method is much easier on our machines and bodies.

## Backing Up the Pilot

by LCdr. Darren Reinhart



**W**HILE TRYING TO IDENTIFY a ship in distress on a night with no moon or visible horizon, the helicopter aircraft commander (HAC) decided to descend from 1,000 feet AGL to 200 feet AGL.

The aircrew did not hear the HAC announce his intention. The copilot was concentrating on the approach checklist, while the crewman was focused on troubleshooting the FLIR. Neither crew member detected the descent because of the lack of visual cues or seat-of-the-pants sensations.

As the helo moved to a lower altitude, the HAC didn't know he was suffering from spatial disorientation. The helo passed through 500 feet at 20 KIAS, but the HAC made no correction for airspeed nor did he communicate this to the crew.

Despite hearing RAWS tones at 250 feet AGL, he flew the helicopter into the sea. The three crew members were rescued by a ship's motor whaleboat, but the helo was lost.

### Lessons Learned:

1. Communication in the cockpit might have prevented this mishap. In multi-crewed aircraft, all crew members should be aware of what is happening during the flight. The HAC should have alerted his

crew and waited for confirmation regarding his intentions before descending.

2. It's the non-flying pilot's responsibility to monitor the flight instruments to back up the pilot on the controls. Should flight parameters or limits be reached or exceeded, it's that non-flying pilot's responsibility to call it to the attention of the pilot at the controls and to take the controls if unsafe flight conditions exist with no obvious corrective action being taken.
3. Aircrew training in operational risk management should continue to emphasize the assessment of potentially dangerous situations so that the crew can back up the pilot in hazardous environments.
4. All crew members are responsible for knowing the aircraft position and flight parameters, such as altitude and airspeed, and to tell the pilot when conditions are unsafe.
5. Crew members not actually flying the aircraft should avoid fixating their attention inside or outside the aircraft to fulfill their primary responsibility of backing up the pilot.

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